

**I. AMENDMENTS TO THE SPECIFICATION**

**A. IN VARIOUS PARAGRAPHS OF THE SPECIFICATION**

Please amend the following paragraphs of the application to read as follows. (These paragraphs have been amended in the manner required by 37 C.F.R. §1.173(b)(1), showing all changes (i.e., with additions underlined and omitted portions bracketed as required by 37 C.F.R. 1.173(d)).

COLUMN 1: In the BRIEF DESCRIPTION OF THE DRAWINGS section, please amend the last paragraph in COLUMN 1 as directed below.

The preferred embodiments of the present invention are illustrated by way of example, and not limitation, in the figures of the accompanying drawings, in which:

FIG. 1 is a wire model of a phased array neurovascular coil;

FIGS. 2A and 2B are electrical schematics of a coil interface circuit that provides multimode operation of the phased array neurovascular coil shown in FIG. 1;

FIG. 3 is a wire model of the phased array neurovascular coil in a first operational mode;

FIG. 4 is a wire model of the phased array neurovascular coil in a second operational mode; and

FIG. 5 is a wire model of the phased array neurovascular coil in a third operational mode.

COLUMN 2: Please amend the second full paragraph in COLUMN 2 as directed below.

FIG. 1 is wire model of a phased array neurovascular coil 50, also referred to herein as a neurovascular array coil. The neurovascular array coil 50 contains four separate imaging coils. The first coil is a quadrature tapered birdcage 60 covering the brain and head. Further details regarding the quadrature tapered birdcage are provided in U.S. Application Serial No. 09/449,256, [ref.] filed Nov. 24, 1999, which issued as U.S. Patent 6,344,745, the contents of which are incorporated herein by reference. The first coil may alternatively be in the form of a domed birdcage, such as is described in U.S. Patent No. 5,602,479, the contents of which are incorporated herein by reference, although the tapered birdcage is preferred because it provides improved field homogeneity on the XZ and YZ image planes.

COLUMN 2: Please amend the last full paragraph in COLUMN 2 as directed below.

FIGS. 2A and 2B are electrical schematics of a coil interface circuit 100 that provides multimode operation of the phased array neurovascular coil 50 shown in FIG. 1. The coil interface circuit 100 couples the phased array neurovascular coil 50 to a magnetic resonance

imaging (MRI) system. The coil interface circuit 100 has a number of signal input [points] ports 102, which are coupled to receive magnetic resonance (MR) signals from the phased array neurovascular coil 50. As shown in FIG. 2A, signal inputs 102 are coupled to output ports (e.g., port #2, port #3, port #4, port #5, and port #6), which are in turn coupled to predetermined MRI system receivers. Many systems, including the GEMS Signa<sup>®</sup> MRI system, provide only four receiver channels. Thus, because not all the signal inputs 102 [cannot] can be simultaneously [be] applied to the MRI system [receivers] when the number of potential signal inputs 102 exceeds the number of available receivers, the interface circuit 100 allows selected signal inputs 102 to be coupled to the MRI system receivers.

COLUMN 3: In the Table within COLUMN 3, please delete the bracketed entries, which are erroneous, and substitute the underlined corrected entries as directed below.

Signal	SMB	System Port	System Receiver
Head I	[P4] <u>P5</u>	5	0
Head Q (high res)	[P5] <u>P4</u>	6	1
Head Q (high speed)	[P5] <u>P4</u>	5	0
C-Spine	<u>P7</u>	4	3
ANT SUP	<u>P6</u>	3	2
ANT INF	<u>P8</u>	2	1

COLUMN 5: Please amend the fourth full paragraph in COLUMN 5 as directed below.

This mode activates the head and posterior cervical spine coils 60 and 70, and disables the anterior neck coils 80 and 90. This allows focal studies of the brain, brain stem, spinal cord, and cervical spine. The two quadrature components of the MR signal from the birdcage coil 60 each drive a separate receiver channel for optimum uniformity and signal to noise ratio performance. The combiner circuit for birdcage coil 60 is electrically disconnected to allow independent reconstruction of the data from the two channels. Similarly, the [The] two posterior cervical spine coil elements 70 also each drive a separate receiver channel.

COLUMN 5: Please amend the fifth full paragraph in COLUMN 5 as directed below.

In CERVICAL SPINE mode, the two quadrature components of the MR signal from each of the two posterior cervical spine coil elements 70 each drive a separate receiver channel for optimum uniformity and signal to noise ratio performance. The head coil element 60 and the anterior neck coils [80,] 80 and 90 are electrically disabled to minimize artifacts and undesirable coil interactions.